

## **Antisocial Behavior and Hypnosis:**

### **Problems of Control and Validation in Empirical Studies**

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#### **Introduction**

One of the oldest questions in the hypnotic literature is whether a deeply hypnotized individual can be induced to perform antisocial or self-destructive acts. A question of marked historical concern and one with far-reaching implications for an understanding of hypnotic phenomena as a whole, it nevertheless remains unresolved to this day. A review of experimental and criminologic literature not only fails to provide a conclusive answer, but also reveals that extant reports are often contradictory.

This discussion re-analyzes the relevant issues in an attempt to provide a more systematic and meaningful context for re-examining the existing data. Such re-examination should suggest research approaches for an empirical resolution of the basic issues and, hopefully, will provide a basis for integrating

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some of the theoretical problems encountered in a study of hypnosis with broader aspects of the social sciences.

##### **Classical Views and Their Modern Counterparts**

As early as 1784, the French Commission of Enquiry into Animal Magnetism concluded that "the magnetic treatment must necessarily be dangerous to morality" (Binet & Fere, 1888, p. 22). Equally categorical were the affirmative answers given to the more fundamental questions of whether the hypnotized individual was completely powerless to resist any command of the magnetizer no matter what the consequences might be to himself or others. For example, in 1856 the general assembly of the Holy Roman Inquisition sent an encyclical letter to all bishops, condemning the use of magnetizing mainly because the technique allowed for an irreligious intervention with the supernatural, but also making the point that some hypnotized individuals were "completely under the magnetizer's control" (Binet & Fere, 1888, p. 55). At about the same time, however, Braid (1843), investigating hypnotic phenomena more thoroughly, concluded that the hypnotized individual's will to refuse suggestions was not impaired, that hypnosis was not dangerous, that, if anything, there was indication of an increase in moral sense under hypnosis, and that suggested crime was impossible.

Systematic research on hypnotic phenomena was first undertaken in France in the 1880's when the Nancy and the Salpêtrière Schools were established almost simultaneously. These schools held widely divergent theories about hypnosis, and sharp controversy arose between them over the specific question posed here. At the Nancy

School, Bernheim (1880), supported by Liebault (1866) and Arnheim (cited by Tobben, 1921-1922), took the view that a hypnotized individual was but an automaton complying with any suggestions made to him. Liegeois (1889), also of the Nancy School, agreed with their position, quoting as evidence many cases which ap-

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peared before the French courts from 1830 to 1888. DuPrel (1889), Bentivegni (1890), Lilienthal (1887), Moll (1888), Forel (1891), and Schrenck-Notzing (1900) concurred with the views of the Nancy School on this issue.

The opposing stand was taken by the Salpêtrière School, notably represented by Charcot (1886), Janet (1889), and Gilles de la Tourette (1887), who observed that even very deeply hypnotized subjects refused suggestions disagreeable to them. Brouardel (cited by Bramwell, 1903), Benedikt (cited by Moll, 1889), and Ballet (cited by Reiter, 1958), also of the Salpêtrière, upheld the same position as did Delboeuf, (1887), the lone dissenter of the Nancy School; in agreement with the Salpêtrière stand were the views of Wagner von Jauregg (cited by Schultz, 1920), Fuchs (cited by Tobben, 1921-1922), De Jong (cited by Bramwell, 1903), and Bramwell.

More recently, Wells (1941), Rowland (1939), Young (1948), Estabrooks (1943), Wolberg (1945; 1948), and Weitzenhoffer (1949) have been leading proponents of the view that, provided the hypnotist's technique is adequate, the subject in hypnosis may be forced to do anything, while Erickson (1939), Schilder and Kauders (1927), Hollander (1922), Lowenfeld (1922), and Meares (1960) have disagreed with this position.

Only those writers who have taken extreme stands are cited here. Others, notably Binet and Fere (1888), Bernheim (1880) in his later writings, and at present Brenman (1942), have held intermediate views. However, this discussion concentrates on the polar positions; neither the intermediate views nor the relatively minor differences between the authorities whose positions are quoted above are examined here.

To provide an empirical test of the question, one must consider the manner in which the extreme classic views have been phrased. Gilles de la Tourette (1887) made the wellknown statement that a subject in deep hypnosis will not

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perform any action which goes against his basic moral sentiments. Dynamic psychology changed the phraseology to read that a hypnotized individual will do nothing counter to his unconscious wishes. However, neither phrasing of the position is testable because the subject's so-called "criminal tendencies" or "unconscious wishes" are specified after the fact. That is, if a subject does not perform the suggested antisocial act, his refusal is taken as evidence for the generic view, whereas if the subject complies, his acceptance of the suggestion is seen as evidence for his criminal tendencies or his basic desires. Post-hoc logic of this type necessarily makes a position irrefutable and untestable.

The manner in which the opposite view has been stated must also be considered. It has been stated perhaps most eloquently by Wells (1940; 1941), who says that a subject must carry out whatever suggestion is given to him by the hypnotist, and a subject's refusal merely proves that he was not hypnotized deeply enough. Phrased in this manner, this position is equally untestable. Any empirical data which indicate that the subject will carry out antisocial or selfdestructive behavior are accepted as proof, while any data to the contrary are by definition dismissed.

One of the purposes of this discussion is to rephrase the classic positions to make them more meaningful within an experimental context. First the question itself will be reexamined. We wish to suggest that the question of whether a deeply hypnotized individual can be induced to commit antisocial or self-destructive actions is a special case of a more generic question about the nature of the hypnotic state, namely: What is the extent of

behavioral control that the hypnotist acquires over the subject in deep hypnosis? Our thesis will be that to clarify concrete and specific issues, such as whether a subject will perform antisocial or self-destructive acts in response to the hypnotist's suggestion, it is first of all necessary to define this range of behavioral control.

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### Social Control 1 Inherent in the Relationship Prior to the Induction of Hypnosis

Observing the phenomenon of hypnosis, one is struck by three major aspects: (1) the subject appears to be in an altered state of consciousness or awareness and to have at his disposal material which is otherwise unavailable to him; (2) the subject manifests a remarkable ability to experience alterations in perception and memory in accordance with cues from the hypnotist even when these are in direct opposition to reality; and (3) the subject apparently loses the ability to act volitionally and responds in accordance with the hypnotist's requests. The wishes of the hypnotist seem to become far more important to the subject once hypnosis is established and continue to remain so even after the termination of hypnosis. Thus, subjects will carry out posthypnotic instructions over long periods of time (Young, 1925, 1926, 1941; Erickson & Erickson, 1941; Schilder, 1956).

The first two aspects of hypnosis are those responsible for the renewed interest in this technique by many professional workers. The modern psychiatric application as well as the medical use of hypnosis to suppress pain are based on these two aspects. It is the third aspect which has attracted the interest of the lay public and the fiction writer and has contributed to the distrust of the technique by modern psychiatry.

The question of whether or not a subject can be compelled to perform antisocial behavior is directly related to this third characteristic of the hypnotic state. Although there has

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1 The term "social control" is used here in the sense of the sociological concept advanced by Weber (1922) and further elaborated by Parsons (1937; 1951b). Some of the variables of control as defined here have been dealt with in psychology under the headings of motivation and learning; however, for the most part these studies manipulate behavior within a specific context, usually experimental, while we are concerned with the effect of different contexts, e.g., experimental versus doctor-patient. The use of the concept of social control provides a link with relevant sociological literature.

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been a tendency to minimize the importance of this aspect, opponents as well as advocates of the technique have assumed that hypnosis increases the subject's tendency to comply with the wishes of the hypnotist. Stated in more general terms, the assumption is made that hypnosis increases the control of the hypnotist over the subject; however, to our knowledge this assumption has never been put to experimental test.

If control is defined to include subjective experience, then one would have to acknowledge that hypnosis is capable of modifying the degree of control which a hypnotist acquires over his subject. However, from the point of view of this paper, alterations in subjective experience will be important only insofar as they alter the behavior of the hypnotized individual. Therefore, for the purposes of this discussion, the degree of control present is defined in terms of (1) the range of behavior that can be elicited at any given point in time, (2) the intensity with which the individual will attempt to carry out behavior requested of him even in the face of obstacles, and (3) the duration of time over which a particular requested behavior will continue to be elicited.

To accept without further investigation the assumption that there is an increase in social control occurring under hypnosis may lead to erroneous conclusions. In lecturing to university students, the writer tends to illustrate the point as follows:

At the beginning of the lecture I request that one of the students remove his jacket, that another one exchange neckties with the student next to him, that someone else take off his shoes, etc. After having elicited compliance with these rather meaningless and somewhat embarrassing demands, I point out to the students that if I had asked a hypnotized subject to perform these acts, the audience's response would have been, "Look how powerless the subject is to resist; he is completely under the control of the hypnotist!" The students' behavior, however, has demonstrated that such actions can equally well be elicited in the waking state

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by a simple request from the lecturer. It is relevant that no student has ever refused to comply with my requests.  
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This demonstration clearly emphasizes the need to explore first the degree of social control present in the context of the particular relationship in which hypnosis is to take place before making statements about an increment in control which is due to hypnosis. Our basic question then is the following: Does hypnosis increase the amount of social control which the hypnotist has over the subject above that which existed before the induction of hypnosis?

Hypnosis does not occur in a social vacuum. Prior to hypnosis some relationship must exist between subject and hypnotist. The degree of social control present is a function of this pre-existing social relationship.

Conceptually we may distinguish between two general kinds of relationships (recognizing that in any given situation these co-exist): (1) personal relationships, the significant factor of which is the idiosyncratic relationship which has developed based on the personalities of the individuals, their previous contact, and their personal histories, and (2) role relationships (doctor-patient, teacher-student, etc.), the relevant aspects of which are that there are well-defined mutual expectations about the type of interaction which can take place in the specific context, and as such the participating individuals as personalities are freely interchangeable; it is the role they play which is important and which determines the interaction.

In our daily behavior we regularly make distinctions between relationships which are personal and those determined by role. An example is the change in attitude which

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2 Our approach is, to a large extent, based on White's (1936; 1941) position which emphasizes the goal-directed striving of the subject who wishes to play the role of the hypnotized individual and on Sarbin's (1950) view which seeks to explain all hypnotic phenomena in terms of the subject's role-taking on an organismic level.

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occurs when a physician attempts to treat a personal friend. Questions inappropriate in the personal relationship now need to be asked, and accurate answers are legitimately expected. To the extent that the eliciting of answers to questions may be regarded as a form of social control, we can say that the doctor-patient relationship has heightened the degree and broadened the area of social control which was present in the situation before treatment commenced. Further role contact (professional relationships between doctor and patient) will be apt to increase the amount of social control. It is relevant to note here, however, that a personal relationship between doctor and patient is a disadvantage in treatment and makes psychotherapy, for example, almost impossible. The degree of social control present in those areas legitimized by the doctor-patient relationship is probably greatest in situations where little or no personal contact exists.

Although a previous personal relationship does not tend to augment the amount of control present in a professional relationship, and vice versa, it is true that the boundaries of the area of legitimization of control are

somewhat diffuse in either type of relationship. For example, the physician may request a wide range of behavior without specifically justifying his demands, and he may still meet with compliance to all of his requests because the patient assumes, even when there is no clear connection between the presenting ailment and the treatment prescribed, that such a connection exists. <sup>3</sup>

Insofar as there is no intense personal relationship from which social control may derive, the relevant source of social control will be the role relationship.

There are three specific role-contexts <sup>4</sup> in which hypnosis usually occurs: (1) the doctor-patient, (2) the experimenter-subject, and (3) the entertainer-volunteer. As we have seen

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<sup>3</sup> This discussion of control is closely related to Weber's (1922) analysis of the charismatic aspects of authority. Parsons' (1951a) discussion of the role of the physician in the United States is particularly relevant here.

<sup>4</sup> That is, institutionalized role relationships.

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above, in theory the doctor-patient relationship legitimizes social control in specific areas; in practice though, the range is very wide because the boundaries of the areas become diffuse since the patient assumes that whatever demands the doctor makes are within his legitimate realm of control.

Similarly, the entertainer-volunteer relationship legitimizes an extremely wide range of social control with relatively diffuse boundaries. One need only observe such programs as Truth or Consequences, Double or Nothing, and People Are Funny to be struck by the remarkably broad range of control which the entertainer may successfully exert over the volunteer-participant. When watching such a performance, the observer somehow does not believe that he could be induced to behave in this manner, while volunteers on the stage very rarely refuse to play their roles. Indeed, it is probably the discrepancy between the amount of control which we would expect an entertainer to have over the volunteer and the amount of control which he actually does have which is responsible for the dramatic appeal of such programs.

The final role-context that we shall discuss here is the experimenter-subject relationship in which hypnosis frequently occurs. The power of this relationship to legitimize otherwise inappropriate requests is illustrated by a rather simple experiment.

Some casual acquaintances were asked whether they would be willing to do a favor and, on their acquiescence, they were asked to perform five push-ups; their common response was, "Why?" Subjects equally little known to the experimenter were asked if they would be willing to participate in an experiment, and after they agreed to do so, they too were asked to perform five pushups; their common response was, "Where?" The simple establishment of a subject-experimenter relationship modified the degree of control.

As well as legitimizing any behavior which appears relevant to the investigation, the experimental situation by its very

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nature also seems to preclude the possibility of a subject's refusing to comply because the request is inappropriate to his role. For other purposes, we have been trying to study the effect that the presence or lack of a meaningful context has on a subject's performance. Toward this end, we have endeavored to create a "meaningless" task. No task devised to date has been perceived as meaningless by the subjects even when the

subjects were instructed to repetitively destroy their own work. Invariably subjects ascribed purpose and meaning to their performance. It appears that within an experimental context no task is perceived as meaningless. Stated more generally, in the context of a psychological experiment the implicit assumptions of the subject seem to legitimize all requests.

All of the contexts then, in which hypnosis is commonly found, are ones which share the characteristic of inherently possessing a high degree of social control. However, in none of these situations is it customary to test the degree of control present and therefore there is a marked tendency to underestimate it. Before it will be possible to arrive at a reasonable evaluation of any increment in the degree of social control induced by hypnosis, it is essential to isolate this variable.

### Alterations in the Degree of Social Control

One of the basic characteristics of hypnosis is that it permits subjectively real alterations of perception or memory in accordance with the cues from the hypnotist. Along with other modifications which can be introduced, subjects commonly describe a feeling of compulsion or an inability to resist suggestions. We wish to consider here separately the subjective experience and the actual degree of control of the hypnotist. An individual may have the subjective feeling of being completely controlled and yet be quite able to terminate the hypnotic state if he were requested to perform an act uncongenial to him. By the same token an individual may

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feel convinced that he has freedom of choice, while in reality his course of behavior may be fully determined by external events. Our purpose is not to discuss the problem of free will, but to indicate that there does not exist a one-to-one correspondence between the subjective experience of freedom of choice and actual freedom of choice.

1. Increased control because of the subject's decreased ability to evaluate his own actions critically. It is possible that the subject in hypnosis abrogates to a large extent the decisionmaking process for the duration of the hypnotic state. He clearly does not test reality in the same way as he would in the waking state insofar as he accepts cues from the hypnotist in preference to the actual sensory input of his organs of perception. Thus if a subject can be induced to believe that he is taking a swim, the fact that he feels the wet water, tastes the salt, sees and hears the ocean would indicate that he has stopped testing the reality of his perceptions. One might expect that the same mechanism could affect his evaluations of his own behavior and produce a temporary suspension of his ability to interpret correctly the meaning of his actions. His faculties of critical understanding and comprehension thus blunted, he might well accept antisocial or self-destructive behavior. To illustrate our point by a drastic example, one might expect that, given a pistol and told to point it at his head and pull the trigger, the subject would fail to comprehend the consequences of such behavior, since he has stopped testing reality in general.

2. Alteration of control by means of hypnotically modifying the subject's perception of reality. A closely related, although conceptually distinct, possibility is the utilization of hypnotically induced distortions of reality as a means of making a pattern of realistically antisocial or self-destructive behavior appear acceptable within the context of the hallucinated situation. This approach does not assume a general loss of reality testing, but merely utilizes a subjectively real hallucinated environment created in hypnosis. For example,

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the subject is given a gun, told it is a cigarette lighter, shown how it works as a cigarette lighter, and then told to light a cigarette with the barrel pointed at his head. Or one can experimentally create a situation in which the subject might consider suicide appropriate. For example, a banker might be told that some speculation had

turned out badly, that various discrepancies had been found which inevitably would lead to ruin and prison, and that he could save his family only by committing suicide. In this artificially created pseudosituation, he would then be given a pistol and told to shoot himself.

3. Alteration of control by forcing a subject to carry out behavior which is repugnant to him. The material discussed so far entails hypnotically induced alterations in the subject's perception of behavior, leading to execution of presumably voluntary actions. An entirely different alternative must be considered; namely, that the subject in hypnosis can actually be forced to carry out behavior against his morals. This commonly held idea of hypnosis, for which there is no definitive evidence, implies that the subject in deep hypnosis can be compelled to perform actions regardless of whether or not he wishes to do so. Certainly the feelings which some subjects seem to experience during an experiment would support such an assumption. If this concept were valid, it would be immaterial whether the subject in our example above wished to shoot himself, and it would not be necessary to disguise the effect of such an action or to assume that the subject is not aware of the consequences. The hypnotist would merely command the subject to undertake the action and could thereby compel him to carry it out.

4. Alteration in control because of a shared belief that the subject is unable to resist suggestions. Alterations in control under hypnosis may result from the conviction shared by subject and hypnotist that the subject in hypnosis has no choice but to carry out the suggestions of the hypnotist, i.e., the *folie a deux* may in itself cause increased control. If the

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subject believes himself to be powerless, he of necessity believes himself to be not responsible. By feeling relieved of responsibility, he may be more willing to comply with requests suggesting behavior which would otherwise induce guilt. A somewhat analogous situation exists in military organizations which can induce their members to carry out destructive behavior without evoking any significant guilt feelings. This effect of hypnosis, however, is to be ascribed to the social situation and the assured lack of responsibility rather than the existence of an actual hypnotic state. The potentiality of the hypnotic situation to increase control under certain circumstances has been discussed by the author elsewhere (1961).

The above breakdown of the hypnosis-control interaction into four categories may clarify some of the controversy regarding the question of the induction of antisocial behavior. For example, Heron (1952), Weitzenhoffer (1949), and Lyon (1954) have pointed out that there is a significant difference between directly or indirectly suggested antisocial behavior. Indirect suggestion implies that the behavior was legitimized by a hypnotically-induced hallucination. Objectively the behavior would be antisocial, but in the hallucinated situation it is acceptable. These authors say, in effect, that one cannot compel the subject to do what he does not want to do, but one can falsify reality to make antisocial behavior appear acceptable. In this regard, Wells (1941), for example, has argued that it is not necessary to falsify reality, and he concludes that the ability to compel the subject to undertake whatever action is suggested is indeed the very definition of hypnosis.

It would seem then that any meaningful discussion of the mechanisms operative in hypnosis requires that one first of all answer the following questions: (1) does hypnosis, in fact, increase control? and (2) is it capable of inducing antisocial and self-destructive behavior? We therefore wish to review the available evidence to establish whether any technique of

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hypnosis can be or has been used successfully to induce the subject to violate his internalized sanctions. In other words, the concern is not with specific technique but with the end result, that is, to establish whether the subject in hypnosis can be induced to carry out behavior that he would refuse to undertake without hypnosis. It is

irrelevant whether he is tricked by a hallucinated environment or any other hypnotic technique. One must, however, distinguish between hypnotic misrepresentation of reality and other forms of trickery. Thus, a hypnotist's representation of himself as a faith healer and the subject's acceptance of this deception do not constitute a hypnotic effect since the success of this form of deception is not contingent on hypnosis.

We shall define the question of whether a subject will undertake antisocial or self-destructive behavior in response to suggestions in the following manner: Can a subject be induced to undertake behavior in hypnosis which he cannot be induced to undertake within the particular relationship without the use of hypnosis?

The Alteration of Control Implied by the Question, "Can Antisocial Behavior be Induced by Means of Hypnosis?"

We wish to distinguish between various situations with very different meanings which have been generally confused in the controversy about the effectiveness of hypnosis as a means of inducing antisocial behavior.

The fantasy, which has been the concern of fiction writers for the past 50 years and has led jurists to ponder the legal implications, postulates some naive subject hypnotized under false pretenses and compelled to carry out behavior of benefit to the hypnotist. Such behavior might be illegal or selfdestructive to the subject who is pictured as a helpless tool of the hypnotist and hence unable to resist any suggestion. This situation is quite distinct from trickery or fraud which would also deceive the individual in his normal waking state.

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The fantasy implies that the subject has no intrinsic wish to carry out the behavior requested were it not for the force of the hypnotic suggestion. Whatever impetus is required for the subject to take action is provided solely by the suggestion. The action itself might well be totally unacceptable and, in fact, is usually conceived as repugnant to the essential nature of the individual. Always implied is the assumption that such acts would not have been elicited by the hypnotist in the light of the pre-existing relationship between hypnotist and subject without the use of hypnosis.

This situation is obviously different from an easily imagined setting in which the subject is requested to carry out quite congenial and gratifying actions which, however, would be inappropriate in the normal course of events and might lead to untoward consequences. Under these circumstances, the subject might well be persuaded to carry out the behavior in the context of the relationship, if a suitable excuse were provided. The college prank associated with fraternity initiation, at times leading to rather serious antisocial actions, is a case in point. There is no question that many examples of relatively harmless antisocial behavior can be induced quite readily. For example, the author had the opportunity of observing a hypnotist who as a counselor in a boys' camp suggested to one of the kitchen help that he enter the assembly hall next day, interrupt the camp director during his Sunday service, and inform him in a loud voice that his mustache looked atrocious and would have to go forthwith. The subject carried out the suggestion with great aplomb. Such behavior was certainly antisocial and most inappropriate. However, it also must have been extremely gratifying to have an appropriate excuse for addressing the pompous camp director in such a fashion without fear of consequences. It is useful, therefore, to differentiate behavior which is congenial to the subject and which he might well be motivated to carry out, given the excuse of not being responsible, from behavior which is unacceptable and re-

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pugnant. Clearly, behavior which different individuals might find desirable will vary according to the personalities and specific situations involved.



Between the two extremes of desirable and repugnant behavior patterns, there is an area of behavior toward which the individual is ambivalent. It might be behavior which in some aspects is extremely appealing while its execution would arouse severe guilt, i.e., it might well violate internalized mores. Cheating at exams or stealing money from an intensely disliked person are examples.

In such a situation where the subject has ambivalence toward an action and where only a very small change in the psychic equilibrium would be required to effect a major change in behavior, it is conceivable that hypnosis might accomplish the small change. For an experimental test of this point, the crucial criterion is whether when urged in the waking state the subject will carry out the action. <sup>5</sup> If, for example, the subject cannot be induced to steal in the waking state but can be induced to do so in hypnosis, this would be acceptable evidence that an individual will, under certain circumstances at least, carry out some types of antisocial suggestions in hypnosis. In this formulation the degree of conscious or unconscious positive motivation to carry out the action is irrelevant so long as the action is such that it would not be carried out when requested outside of hypnosis. Unfortunately, it is most difficult to test rigorously this particular type of situation. The difficulties involved in an empirical test of this specific issue will be further elaborated in a later section of this paper, outlining the experimental approaches to the general problem.

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<sup>5</sup> In this discussion it is assumed that the social relationship between the subject and the person requesting the action is the same as that which would exist with the hypnotist.

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### The Apparent Extension of Behavioral Control with Hypnosis

A considerable body of literature has dealt with the generic topic of the transcendence of normal volitional capacities. From the point of view of our present discussion, any evidence confirming that hypnosis enables the subject to carry out behavior which exceeds his normal volitional capacities would be relevant, since it would document a specific occasion on which a hypnotist has actually acquired greater control over the subject's behavior than was available before the induction of hypnosis. This would have to be the case because if the behavior was not within the subject's repertoire prior to hypnosis and could be elicited only by hypnosis, it would of necessity have been outside of the prehypnotic control.

Despite numerous clinical reports and some experimental data obtained without the use of adequate controls, Hull as early as 1933, Sutcliffe (1958; 1960), and Orne (1959b) more recently, have pointed out that there is not a single reliable experimental demonstration of such a transcendence. Careful examination of the alleged cases of transcendence frequently reveals that the behavior in question is actually within the normal repertoire of the average subject, although intuitively this seems implausible to both the subject and the experimenter. A case in point is the well-known stage demonstration of placing a subject across two chairs with his heels on one and his shoulders on the other. The subject, body rigid, forms a bridge and permits a third person to sit or stand on his midriff. The author, greatly impressed by this demonstration when he first observed it, decided to test the capacity of nonhypnotized subjects to perform the same feat. Much to his surprise, he discovered that a normal waking individual could easily support the weight of a person on his abdomen in this position! Thus, what at first sight had seemed clear-cut evidence of transcendence, turned out, on more careful ex-

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amination, to be a task which merely appeared to require superhuman strength but did not, in fact, place any undue stress on the subject.

After reviewing the literature on hypnotically induced anesthesia, Shor (1959) came to similar conclusions. (See his chapter in this volume.) Certainly, this issue cannot be said to have been resolved conclusively, but the current evidence would suggest that claims based on intuitive observations should be interpreted with extreme care.

To our knowledge, there have been no systematic attempts to evaluate behavioral control in hypnosis versus that present in other circumstances. Only one clinical phenomenon deals directly with this problem: namely, the common, well-authenticated observation that a wide variety of functional disorders may be temporarily, and in some instances even permanently, suppressed by hypnosis. These disorders represent items of behavior, i.e., functional symptoms, which the patient has been unable to relinquish. Almost invariably, a number of individuals -- often the hypnotist himself -- have tried without success to persuade the patient to abandon his symptoms. Here we have then a situation which appears to meet our criterion; namely, items of behavior which are outside the control of the hypnotist prior to the use of hypnosis and come under his control only after the induction of hypnosis.

However, clinicians generally recognize that the success of symptom removal is not primarily a function of the depth of hypnosis, but rather of the role that the symptom plays in the patient's psychic economy and the meaning which the hypnotic relationship holds for him. There are many instances in which deeply hypnotized subjects have failed to abandon symptoms, while other patients appear to respond dramatically with only a very light hypnotic experience. The fact remains that symptom removal represents an instance of increased behavioral control. In this context, some of the untoward consequences of inept attempts at symptom re-

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moval are particularly relevant, i.e., depression following weight loss, severe dermatitis following the surrendering of compulsive rituals, etc. Such cases deal with situations in which the patient feels compelled to follow the suggestion and, unfortunately from his point of view, is forced to abandon the symptom. Such forced behavioral alteration then leads to deleterious consequences. This is not the place to discuss the psychodynamics of symptom removal, but there is a need to emphasize that the patient at some point certainly has had a considerable degree of motivation to relinquish his symptom, since he did present himself at the office of the therapist. In such instances hypnosis causes what might be a very slight shift in the psychic equilibrium, which in turn makes possible a major alteration in behavior. There is probably a considerable difference between the magical legitimization of change by hypnosis and the quasi-rational attempt to persuade the patient in the waking state. It is generally known that all results observed in hypnosis have also been observed in response to other quasi-magical legitimations of change, e.g., to faith healers, shrines such as Lourdes, Christian Science, etc. Therefore, wherever disposition to alteration is present and only a very slight shift is required to enable the individual to change, magical procedures may be particularly potent.

### Instances of Decreased Behavioral Control in Hypnosis

Thus far, one aspect of the problem of hypnotically induced antisocial behavior has been ignored, namely, that we are dealing with control over behavior which violates internalized sanctions or what might be called superego inhibitions. The theorists writing from a psychoanalytic viewpoint have emphasized that in hypnosis the hypnotist takes on some of the superego functions [notably, Kubie and Margolin (1944) and Brenman and Gill (1947); see also Gill and Brenman (1959)]. This point is relevant in the light of Bramwell's

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(1956) and, more recently, Gindes' (1951) observation that superego inhibitions of hypnotized patients appear to be heightened rather than lessened.

Bramwell cites a classic instance of a girl in hypnosis who refused to uncover her chest at her physician's request even though she had been frequently examined by him in the waking state and had on those occasions not hesitated to comply with his request.

Another relevant observation shared by every investigator with whom the author has had the opportunity of talking is that subjects will occasionally refuse to carry out an apparently innocuous suggestion although they give every evidence of being in deep hypnosis. Thus, for example, a female patient refused to make a fist during an experimental session. It was quite clear that she felt disturbed by this request, and the matter was dropped at the time. After completion of the hypnotic session, she was asked in the waking state to make a fist and did so without hesitancy. Subsequent exploration revealed that she had been a tomboy and as a child was frequently punished for fist fighting. Apparently the request to make a fist in hypnosis had symbolic meaning not attached to the same request in the waking state.

In addition to these anecdotal examples, there are Young's studies (1927; 1928) testing the ability of subjects to resist suggestions. Before inducing hypnosis he asked subjects to select one item from his list of suggestions which they were to try to resist and found that in subsequent sessions, despite deep trance, subjects were able to resist the suggestion they had chosen. Wells (1940) repeated this experiment and reports diametrically opposite results, supporting his view that a subject in sufficiently deep hypnosis can be compelled to carry out behavior contrary to his wishes. Similarly, Watkins (1951) reports a subject who could not resist suggestions despite the fact that she had been offered financial reward if she resisted successfully. These findings are all based on laboratory situations involving harmless actions. They are relevant since they

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do deal with the subject's ability or lack of ability to control his behavior in deep hypnosis. The discrepancy can most probably be accounted for in terms of what Wells (1946) has referred to as "expectancy," Estabrooks (1943) has described as "operator attitude," and what has more recently been termed "demand characteristics of the experimental situation" (Orne, 1959a). In some respects, anecdotal evidence is more pertinent since in each of these reported instances the subject's behavior was spontaneous and came as a surprise to the hypnotist. For example, an excellent subject in deep hypnosis awoke spontaneously after age regression had been induced. Hypnosis could be re-established only after the hypnotist had promised that she would not have to continue in age regression. Subsequent investigation disclosed that she had decided, without informing the hypnotist, that for personal reasons she would not experience age regression.

The clinical material seems to suggest even more strongly than does the experimental evidence that hypnotized subjects, including those in deep hypnosis, maintain what Fisher (1958) has aptly termed "the sixth sense of reality." Under some circumstances at least, they are able to resist effectively the execution of suggestions perceived to threaten some aspects of their personalities. Numerous instances can be cited of subjects in hypnosis refusing to carry out behavior which they will carry out in the waking state.

### Some Considerations Regarding Experimental Tests

The research on antisocial behavior has not dealt with the problem in the broader context of social control. The experimental studies fail to deal with the central issue, namely, the social context in which the studies were performed. We need to analyze the requests which are made of the subject and the definition of the specific situation against the background of the broader social situation in which research is conducted, and try to understand the results of experimental investiga-

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tions by an analysis of what is actually communicated to the subject in the various studies. Clearly a situation is not defined merely by verbal instructions; it also depends on the context of previous experience with the people involved, knowledge about their background and that of similar individuals, and a host of subtle cues which make the specific comments meaningful.

The task of determining conclusively whether an individual in hypnosis will commit antisocial or self-destructive acts is extremely complex and difficult. Several problems have been particularly vexing and responsible for considerable confusion. Perhaps the most difficult issue to deal with is the congruence of the cues defining the situation. For example, a hypnotist may say that an item of behavior is dangerous, but by his actions clearly convey an absence of concern. He may suggest that a subject carry out a given behavior, but by his tone and demeanor indicate the expectation and wish of being refused.

It is exceedingly difficult to categorize behavior. Any act will lead to certain consequences; however, the full consequences are not necessarily clear to the actor. <sup>6</sup> Certainly, insofar as the actor is not aware of the consequences of his behavior, the actual consequences do not have any direct effect on his behavior. Therefore, it is necessary to analyze the consequences of behavior in terms of the subject's perception, rather than in terms of the actual implications of the behavior.

Behavior can be taken at face value, that is, accepted in terms of the apparent meaning it suggests to a third person. This interpretation is the one which the experimenter usually adopts in setting up his study. For example, he may say that taking a dollar bill out of a person's pocket is theft, or throwing corrosive acid at an individual is obviously antisocial. Significantly, this is the meaning of the behavior as defined by the experimenter, but not necessarily the true .

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<sup>6</sup> "Actor" is used as by Parsons (1937) to refer to the individual acting in the context of a situation.

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meaning of the behavior in the context of the situation. It should be emphasized that the only relevant criterion which determines the significance of an action is what the subject, utilizing all the explicit and implicit cues available to him, perceives his behavior to mean in the context of the situation. Thus the fact that an action is requested by the subject's professor in the laboratory of a university alters considerably the contextual meaning of the behavior. While throwing acid usually represents antisocial behavior, in an experimental context it may well be clear to the subject that the situation demands safeguards to prevent any untoward consequences even though such safeguards are not apparent to the subject at the time when the behavior is being requested.

The confusion between the behavior at face value and the behavior as interpreted by the subject in the experimental context is to a large extent responsible for divergent interpretation of experimental data. A large number of variables affects the subject's perception of the meaning and consequences of his behavior in any given situation. These include: (1) circumstances in which the behavior is requested, e.g., whether in a laboratory, in private, with witnesses present, tape-recorders going, etc.; (2) the reputation and status of the hypnotist, since certain reasonable expectations may be drawn from these factors; (3) the purpose the subject ascribes to the hypnotist's request. Thus, in many or all experimental studies common sense would tell the subject that the hypnotist has no motive in terms of personal gain and that his purpose, therefore, is one of scientific curiosity. Such a purpose would not justify risking dangerous consequences. Thus, the subject's perception of absence or presence of motive other than scientific curiosity is an important variable intimately related to the plausibility of the situation.

Quite distinct from the question of the behavior elicited are the instructions given to the subject. A distinction must be made between instructions unrelated to hypnosis which define the external situation and those given in hypnosis for

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the purpose of the experiment. The external instructions include such matters as how the subject is solicited, whether paid or volunteer, what he is told in advance about the study, and a host of implied assurances characteristic of experimental and clinical situations in general. Instructions of this kind, although their significance is often ignored, are intimately related to the previously discussed matter of how the behavior in the actual experimental situation will be perceived. They may frequently run exactly counter to the instructions utilized during the experiment proper. The situation suggests a play within a play, and, just as in the dramatic device, the over-all play determines the meaning and interpretation of the subplot.

How suggestions are worded may confuse what actually occurs. For example, the experimenter may tell a subject, "I want you to swallow this capsule for an experiment," and any subject volunteering for drug studies will unhesitatingly do so. What does it mean if he tells a subject, "This pill is poisonous and will kill you if you swallow it; now swallow this poison pill"? In the waking state the subject will interpret this either as a joke or he will accept the premise that the capsule is poisonous and interpret the request as perhaps a test of his sanity. If, however, the experimenter effectively communicates that he intends the subject to swallow the capsule, the subject will be compelled to assume that the capsule really cannot be poisonous or that an adequate antidote is available, since no responsible investigator could possibly administer poison to his subjects. A truly effective communication of insistence on compliance, it must be stressed, necessarily forces the subject to reinterpret the statement that the capsule contained poison. From the subject's point of view the previous statement and the investigator's subsequent behavior are incongruent and incompatible. It should be apparent that by introducing hypnosis prior to the request the experimenter might have successfully confused the issue for himself, but it is highly doubtful that any different thought

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process would have been induced in the subject. The experimenter could have induced further confusions by telling the hypnotized subject that the capsule previously described as poisonous was really a vitamin pill and that it was pink rather than its actual color, green. This added bit of conflicting instructions would have been quite superfluous since the communication of desire that he swallow the capsule would probably have been sufficient to assure the subject that it was harmless.

The crucial point in this example was communication to the subject that the experimenter in fact wanted him to swallow the capsule. This is by no means the same as a request which may or may not communicate definite expectations of compliance. In other words, the situation is not altered by introducing hypnosis, but rather by the effectively communicated expectation. Thus it is possible that while making a direct request to swallow the capsule a hypnotist may also nonverbally communicate a wish for refusal of the request and, similarly, an indirect suggestion of the same behavior may communicate the wish that the action should be carried out. The experimenter would then observe differences between direct suggestion and indirect suggestion which would, however, be unrelated to the variable of direct versus indirect suggestions; rather it would be a function of the effectiveness of the communication of the experimenter's wishes to the subject. In a simplified way, this represents the problem of interpretation of experimental results. The experimental data do not indicate that the directness or indirectness of a suggestion is necessarily a determinant of the behavior.

### Experimental Studies

The experimental work in the area of antisocial behavior will be outlined without discussing the details of the studies which, though relevant to the methodological problems involved, are nevertheless of relatively minor significance for an

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understanding of the issues. The studies are grouped to bring into bolder relief the problems that must be considered before a conclusive experiment can be designed to test the question. From the standpoint of the investigator involved, each of the studies cited seemed to answer the questions posed in this paper, and only a systematic survey of the extant material has made it possible to recognize some of the more obscure, but nevertheless significant, factors affecting the experimental results.

The controversy regarding antisocial behavior dates back to the beginning of scientific interest in hypnosis. A great many studies were performed by Liebault (1866), Bernheim (1880), Liegeois (1889), Janet (1889), and Forel (1891), all of whom based their investigations on the following pattern. The subject would be asked to commit what appeared to be an antisocial act, but was given inadequate equipment. He would be handed a rubber dagger to stab, or a sugar pill, purportedly poisonous, with the instruction to kill. The results of these experiments vary, but they lead, in essence, to the conclusion that either all or at least a percentage of subjects will carry out the suggested pseudo-antisocial behavior. The total situation may be analyzed as follows: the behavior is harmless at face value, though the explicit instructions say that it is antisocial and dangerous. The implicit instructions inevitably convey that the behavior is harmless, although the idea is occasionally communicated that it ought not to be carried out because of its symbolic meaning. However, the subject perceives the behavior to be harmless. The experiment then is one of the classic examples of conflicting instructions being given to the subject, and depending upon the subtle nuances of how these are given, varying proportions of subjects will comply. It is of interest to note that both Janet (1889) and Bramwell (1903) report that when the situation is made real, a female subject asked to undress in public will refuse to comply. Bramwell sums up this group of experiments pithily: "The arguments of Bernheim are devoid of

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value, as they are founded exclusively on cases where (1) a simple and harmless act has been assumed to be thought criminal by the subject, because the operator has stated it to be so; and (2) where the subject has permitted something in hypnosis which he would probably have submitted to in the normal state" (pp. 330-331).

More recent experiments, notably those by Erickson (1939), Wells (1941), Brenman (1942), and Haupt (1937) all deal with suggestions asking the subject to steal a dollar bill, pick up someone else's wallet, or tear up allegedly important notes which are left conveniently exposed on a table. In these experiments "planting" the material to be "stolen" has a certain staged aspect very reminiscent of the pseudo-antisocial weapons provided by Liegeois (1889), and it would appear that the results, whether positive or negative, depend more upon the investigator than on the task. Weitzenhoffer (1949; 1957) and Heron (1950; 1952) have both emphasized that an antisocial action can be more readily induced by indirect suggestion, and it is true that Erickson (1939) requesting relatively innocuous tasks, was unable to obtain compliance by direct suggestion. However, Wells (1941) successfully used direct suggestions.

In terms of this analysis, these experiments all utilize behavior which at face value is antisocial but certainly represents no more than a minor misdemeanor. In the context of the situation, however, these actions are by no means necessarily antisocial even in a minor way; thus, to tell a subject in an experiment to take a dollar bill is difficult to construe as an invitation to actual theft. Subjects are frequently paid for participating in studies, so that if a reputable investigator asks a subject to take money that belongs to a third party, it seems logical to assume that he will either reimburse the third party or at any rate make certain that no actual loss will result. Thus in all such experimental situations, the behavior does not permit generalization to a real-life situation. The implications of instructions in these experiments vary, and

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it is the implications which are responsible for the differential results obtained by investigators who have posed essentially similar tasks to their subjects. Thus Erickson (1939) and Haupt (1937) explicitly defined the experimental tasks as antisocial while the implicit definition probably was one of harmlessness; the explicit instructions asked for the execution of antisocial acts, but the expectation of noncompliance was implicitly conveyed to the subject.

Brenman (1942) discusses a more complex situation. She defined a task as antisocial, but, in giving the hypnotic instructions, redefined the same task as acceptable. She overtly requested compliance with the instructions and also communicated implicitly that the behavior should be carried out. The crucial factor in her studies, it seems, is not her explicit justification and legitimization of the behavior, but rather the fact that in the experimental context the behavior itself is essentially harmless. The elaborately developed hallucinated situation which justified the behavior was probably unnecessary, but it might have helped to convey more effectively that she expected compliance.

Wells (1941) provides the experimental data to support this view. He was able to induce compliance to the same type of behavior requested by Brenman without hypnotically falsifying the situation.

The experiments by Watkins (1947) and Schneck (1947) were performed in a military setting; the antisocial behavior consisted of unauthorized absence from duty, striking a superior officer, and revealing classified information. These studies are interesting in that they deal with the violation of actual codes which could conceivably lead to serious consequences; at face value, then, these behaviors could plausibly be considered antisocial and dangerous to the subject. In the Watkins experiment the subject was told that an officer was Japanese and that he should attack him; in another case a WAC was forced to divulge secret information in violation of orders received from her superior officer. It must be kept in mind

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that Watkins was an officer in service at the time of these experiments and that in this context neither of these behaviors was actually dangerous. Thus, for example, the WAC's superior officer was present at the time of the experiment, and the situation strongly resembled the staged aspect of the old experiments performed by Liegeois (1889). The soldier who attacked his officer in the hypnotically induced belief that the latter was Japanese provides an example of a situation in which the experiment legitimizes behavior which is dangerous only in the military context -- attacking an officer. However, the hypnotist has provided an extremely adequate excuse for a behavior which we might well conjecture to have been thoroughly gratifying to the soldier. In his report Watkins states that the soldier had to be restrained by several people whose presence undoubtedly helped him to give a more convincing performance. Finally, the report of Schneck deals with an inadvertently given suggestion resulting in antisocial behavior. The soldier had been told in hypnosis that he should report to Schneck the next day; to do this, the soldier had to absent himself from duty. While this is an offense, it is also part of the army code to follow instructions given by the medical officer, and the soldier may well have had the reasonable expectation that Schneck would prevent any punitive action which might ordinarily result from his absence. This expectation, incidentally, was borne out. Thus, each case deals with behavior which realistically is not dangerous and not particularly antisocial. The instructions in each instance are essentially unambiguous, communicating the wish that the behavior be carried out, which indeed it was. Any generalization from these experiments must take into account that in the context in which they were carried out no effectively antisocial behavior was elicited.

The experiments of Rowland (1939), Young (1948), and Lyon (1954) are slightly different. The subject was instructed to perform behavior which at face value is highly antisocial and dangerous, i.e., he was asked to throw acid, which had

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been demonstrated to be real, at another individual or to pick up a snake which he had been led to believe was poisonous. Every attempt was made to reinforce the illusion. Of course, the experimenters were careful to take precautions. Thus, for example, the snakes either were separated from the subject by invisible glass or a harmless snake indistinguishable from its poisonous cousin substituted. We are confident that the reader did not doubt that some precautions were taken to prevent any actual injury. Unfortunately, the subject may also have taken precautions for granted, and it is only reasonable that a subject should expect a reputable laboratory to eliminate the possibility of injuries, no matter what surface appearances might indicate. As previously indicated, the very fact that one has been able to communicate to the subject that he is actually to carry out behavior which at face value seems highly dangerous in itself tells him that the requested behavior cannot lead to the dire consequences which seem inevitable. Hence, even accepting the authors' contention that the invisible glass was invisible, or that the switching of the acid for harmless fluid was not apparent to the subject, or that the harmless snake was actually indistinguishable from the poisonous one, the experimental context inevitably suggests to the subject that no real danger exists regardless of what his senses tell him. Thus, in the experimental situation the subject's common sense takes precedence over what his senses tell him.

In these experiments compliance could be elicited either by direct suggestion or by hypnotically falsifying the situation. Young carried out his experiments in both situations and found little difference in his ability to force subjects to carry out types of behavior which both Lyon and Rowland went to some trouble to rationalize by hypnotically induced hallucination. The conflicting instructions in the latter two studies merely make interpretation more difficult but do not materially affect the outcome, i.e., compliance or refusal. Unfortunately, these studies, dealing with actions that would seem

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to satisfy the criterion of truly antisocial and dangerous behavior, cannot be accepted at face value. The principal problem, of course, lies in the staged aspects of the experimental setting. If our analysis is valid, subjects should be willing to perform antisocial or dangerous acts even if they are not hypnotized, provided the experimenter really communicates his wish that the behavior be carried out. As previously indicated, this communication is crucial since it leads to a reinterpretation and a re-evaluation of the consequences of the actions to be undertaken by the subject. All authors report that subjects in the waking state usually refuse to execute the requested actions, but unfortunately none of the investigators ran any systematic controls comparable to the hypnotic situation. We have repeatedly emphasized that the experimenter who communicates to the subject his definite desire for compliance inevitably redefines the situation as safe, regardless of appearances. Therefore such subjects may readily comply with the experimenter's request whereas subjects who are casually asked whether they are willing to undertake the task may refuse with horror. In these latter cases the investigator has not communicated that the behavior is safe, and refusal with strongly affective reactions can be anticipated. For this reason it is necessary to control carefully the manner in which the investigator makes his request.

One study, perhaps the most interesting of this group, remains to be discussed. A recent study reported by Kline (1958) describes an experiment in which a criminal act was repeatedly carried out in response to hypnotic suggestions. Unfortunately, to protect the subject and the experimenters from possible difficulties, the report is extremely sketchy. However, in personal communication Dr. Kline (1959), has convinced the author that the action in question was a real offense which, under normal circumstances, a subject would not be willing to carry out. This report is unique in that several hypnotists participated and the action was suggested both directly and indirectly. One hypnotist was unable to elicit the

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behavior and discontinued participation in the study because of strong feelings about the experiment. Of the other four, only one hypnotist was able to elicit the behavior by direct suggestion, the one, incidentally, with whom the subject had an already established relationship. The relevant result is that in this situation, at least, it



seemed to make some difference how the suggestion was given, directly or indirectly; however, it is significant that one hypnotist at least could obtain the behavior by direct suggestion, and there is some indication that the particular pre-existing relationship between subject and hypnotist is a variable. This study is unique in that it deals with the experimental induction of behavior which not only violates the law, but also would seem repugnant to the subject. Unfortunately, it was not possible to test the extent to which the subject could have been persuaded to undertake the task without hypnosis. Furthermore, this is but a single case. It is interesting that some six months after the experiment, the posthypnotic amnesia which had been maintained was lifted, and at that time the subject was not unduly upset about his behavior in hypnosis (Kline, 1959). This is surprising despite the subject's positive relationship with the experimenter and his interest in testing the legal implications of hypnosis. The action in question was not one to bring harm to another person and perhaps was more acceptable to the subject than one might assume. Unfortunately technical problems and ethical issues make this type of experimental work rare. In the absence of more data, this is striking anecdotal evidence, but not proof. While the reported differences in compliance with different hypnotists and differing instructions are of interest, it is not possible to establish whether the content of the suggestions, the manner in which they were given, or the person of the hypnotist were the relevant variables. In the laboratory situation it would have to be clearly demonstrated that waking subjects cannot be induced to perform the behavior requested before attempting generalizations to situations outside the laboratory. Experimental re-

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sults could become more meaningful if the plausibility of the laboratory setting could be increased. In all situations described thus far, the experimenter has little or nothing to gain from the subject's behavior. Utilizing a hypnotist of less prestige and introducing a plausible profit motive so that the hypnotist would appear to gain something of major importance by the subject's actions, would go a long way toward creating a situation from which one might generalize. Naturally, it would still have to be demonstrated that the subject when not hypnotized would refuse to carry out the behavior.

### Criminal Literature

In many ways the most relevant and meaningful information about the possibility of hypnotically induced antisocial behavior can be obtained from the criminologic literature. The induction of hypnosis requires very little technical competence from a hypnotist working with highly susceptible subjects. Techniques of hypnotic induction are widely known and readily available in innumerable books. Furthermore, techniques of hypnosis are generally known by professional mind readers, mediums, seers, and other kinds of "psychoquacks" who are not, in general, noted for high ethical conduct. Therefore, it would seem reasonable to assume that if subjects can be induced to perform behavior which would benefit the hypnotist, a fair number of such cases would have come to the attention of law-enforcement agencies. In point of fact very few instances of hypnosis have been the object of legal proceedings within recent years. The number of cases collected prior to 1900, by contrast, was fairly large. However, these are very difficult to evaluate; for example, a classic case is quoted by Moll (1889), who quite seriously states: "The Levy case, in 1879, is also quite interesting. A dentist of Rouen, named Levy, assaulted a girl in the magnetic sleep. The case is remarkable because the girl's mother was present and noticed nothing. Levy had placed the dentist's chair so as

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not to be seen. Brouardel gave his opinion on the case and Levy was imprisoned for ten years" (pp. 335-336). This report is reminiscent of witchcraft trials of the not-too-distant past. It is more useful to consider cases providing more data where evaluation by the courts is perhaps more realistic. 7

These cases fall into two main groups: (1) some form of sexual offense was committed on the person of the subject by means of hypnotic techniques, and, far more rarely (2) the subject carried out an action leading to

material benefit for the hypnotist.

The difficulty of evaluating instances of alleged rape by means of hypnosis is extreme, particularly since in many instances, especially in a therapeutic context, subjects are not always able to distinguish between fantasy and actual behavior. Thus, certain patients will report seductions by any number of individuals, some of whom they may never have met. It is easy to see how following a hypnotic session where amnesia had been induced an imaginative patient might fill the gap in her memory with fantasy material of a sexual nature. The same process would hold in many nontherapeutic contexts which might evoke sexual fantasies. Furthermore, in some cases actual sexual relationships are defined as rape only days and at times even months after the fact. Certainly hypnosis lends itself well to the justification of behavior which might have its motivational roots elsewhere. Moreover, patients in psychotherapy typically develop sexual feelings toward the therapist regardless of the technique of treatment employed. It is clear that acting out on the part of the therapist is unethical and perhaps criminal; nonetheless, were a therapist inclined to act out with a patient, a sexual relationship might presumably develop, and transference might be a quite sufficient reason eliminating the need for any further explanation such as hypnosis. It is therefore not ap

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7 A case that has been more systematically reported but in which one encounters the same sort of difficulties in interpretation is the Czynski case described by Forel (1891) and Hammerschlag (1954).

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parent whether in the reported cases hypnosis was used to justify behavior which became embarrassing or difficult to tolerate after its occurrence, or whether whatever sexual relationship occurred might have been due to transference feelings, or whether hypnosis actually induced the subject to engage in behavior which would otherwise have been unacceptable. Certainly within the context of a doctor-patient, teacher-student, or pastor-parishioner relationship sexual acting out is a frequent occurrence which under different circumstances would have been unacceptable. Since in most cases in which hypnosis has been claimed to play a role the relationships have fitted one of these patterns, it is even more difficult to determine after the fact the possible relevance to the question as formulated here. An example illustrating this point is the recent well-publicized case of a girl in Albany, New York, who claimed to have been compelled to marry by means of hypnosis (New York Mirror, 1960).

Three cases have been reported in some detail and studied psychiatrically. Significantly, all three instances represent long-term relationships between subject and hypnotist. As indicated earlier, social control may derive from two aspects of the relationship: the role relationship and the personal relationship. Of necessity almost the entire experimental literature deals with the effect of social control inherent primarily in the role relationship between subject and hypnotist. In these three cases, however, the effect of social control which could be attributed to pre-existent role relationships is relatively minor while intense affective relationships between individuals predominate. In each of the reported cases a quasi-love relationship pre-existed, or at least developed concurrently with the use of hypnosis. To consider realistically the question of pre-existent control before hypnosis is employed, one must review the kind of control which extremely close friends may exert over one another. In evaluating our examples, such a comparison should be kept in mind.

One of the well-documented cases commonly referred to

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as the Heidelberg case and reported in detail by Mayer (1937) is hard to evaluate for the above-mentioned reasons. In brief, a country girl met an individual on a train who claimed to be a healer and who offered to relieve her of some vague discomforts which she was experiencing. The "healer," over a period of years,

obtained a substantial amount of money from the girl on the pretext of relieving her symptoms, had sexual relations with the subject, and induced her to have relations with a series of friends. Allegedly in response to the healer's hypnotic suggestions, the subject made repeated attempts on her husband's life. This case exemplifies a situation in which the subject not only carries out behavior beneficial to the hypnotist at a personal loss to herself, but also commits very serious antisocial acts in the attempts on the life of her husband. But here again a quasi-therapeutic relationship existed between the subject and the hypnotist, and thus it is not too surprising that the subject was willing to pay the hypnotist. The objective fact that the healer did not possess adequate qualifications for treatment has little relevance to the relationship, though it establishes the crime of grand larceny. Regarding the sexual behavior, the above discussion appears relevant, and it is in our opinion impossible to evaluate its significance. With respect to the subject's attempts on her husband's life, which constitute the most serious aspect of the case, it certainly is not too unusual a crime for a woman and her lover to plot the demise of the husband. The healer was eventually convicted of grand larceny and practicing medicine without a license. There are only the woman's statements that attempts on her husband's life resulted from posthypnotic suggestions. No proof exists that such suggestions were ever made, and Mayer's report does not even include an attempt at psychiatric evaluation of the hypnotist involved.

A case thoroughly studied by Reiter (1958) occurred in Denmark within recent years. The male subject was induced to rob a bank twice and bring the money to the hypnotist. In

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the course of the second bank robbery the subject killed two men. This case satisfies the criterion of serious antisocial behavior to the benefit of the hypnotist; however, a long history of extremely close personal association preceded this occurrence. Subject and hypnotist had been cell mates in prison, and the subject himself had collaborated with the Germans in what was considered by the courts antisocial behavior. Both subject and hypnotist shared a quasi-psychotic system designed to save Denmark from the communists and establish the subject as its benevolent dictator. The motivation for the bank robbery was presented to the subject as a necessary means of obtaining funds to carry on the party work. Finally, it must be pointed out that an extremely peculiar relationship with strong homosexual overtones existed between the subject and the hypnotist; for example, the subject married a girl selected by the hypnotist and induced her to have relations with the hypnotist the day before the wedding. Thus, while this case on the surface suggests that antisocial behavior was induced by hypnosis, there are many indications that numerous other factors might well account for the behavior. The courts refused to comment on the question of whether or not hypnosis was the basis for the behavior; rather it was determined that the subject was insane at the time of the crime, and the hypnotist was convicted as an accomplice before and after the fact. It was never even established whether the hypnotist was attempting to induce this behavior for his personal gain or whether he, too, believed in the delusional system. While hypnosis played some role in this case, it is by no means clear whether it accounted for the behavior of the subject or was, in fact, quite incidental to it.

The Kroner case, reported by Reiter (1958), is equally unclear for similar reasons. Here again is the problem of acts undertaken in the context of a long-term relationship. Briefly, Kroner states that in 1921 a 25-year-old German schoolteacher was exploited by a 38-year-old neighbor who employed hypnosis to extort money over a period of five years.

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Eventually the schoolteacher was influenced by this neighbor to make exaggerated claims to insurance companies purportedly for goods which had been allegedly stolen from his house without his knowledge but which, in fact, had been taken by the hypnotist neighbor. The neighbor had requested the schoolteacher in hypnosis to produce exaggerated inventories for the insurance claims and had informed the subject in hypnosis that he, the hypnotist, would steal the actual belongings which were being claimed.

The relationship between teacher and neighbor began with the neighbor paying daily visits to the schoolteacher, doing favors, and generally ingratiating himself. The neighbor, extremely talkative, often told stories that lulled the schoolteacher into drowsiness. Eventually the neighbor was able to induce hypnosis, reportedly without the schoolteacher ever knowing he was hypnotized. From this time on, the hypnotist had little difficulty suggesting to the subject that he provide the hypnotist with money and goods. To test the extent of his power over the schoolteacher, the neighbor gave him a posthypnotic suggestion that at a given cue he would shoot himself in the left hand. The schoolteacher actually did shoot himself in the left elbow joint --subjectively perceiving the event as an accident. After this proof of his power, the hypnotist demanded larger and larger sums of money and eventually suggested the two insurance company swindles. The schoolteacher complied with all of these suggestions, and finally the hypnotist induced the schoolteacher to "confess" to crimes which had been either suggested (exaggerated insurance inventories) or actually committed (stolen goods) by the hypnotist.

The schoolteacher was convicted for two reasons: (1) the hypnotist charged him with being the originator of the various crimes (to avert total blame from himself) and (2) his confession. Subsequent to his arrest, one of the wardens happened to mention that the neighbor had boasted of having had the schoolteacher under his influence by means of hypnosis. At

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this remark the schoolteacher began to piece together various incidents which convinced him that he must have been hypnotized. However, the authorities were unimpressed by his story because the schoolteacher was a very well-educated man, whereas the neighbor was coarse and uneducated. After many appeals of sentence, the schoolteacher finally came for examination to Dr. Kroner who rehypnotized him and brought to light the true state of affairs by enabling the schoolteacher to recollect in hypnosis all of the previous hypnotic experiences with the neighbor.

In some ways the Kroner case is the most convincing of the three reported in the criminal literature. The schoolteacher was shy, isolated, and away from home; also, shortly before his acquaintance with the hypnotist, his father had died. Hence, it is significant that the neighbor was 13 years older than the subject. These factors would account for an intense affective relationship between hypnotist and subject; however, they do not seem to account for the report that the teacher carried out the posthypnotic suggestion to shoot himself in the hand. This single incident is far more impressive than the fact that he was willing to perform acts which are legally antisocial but which are frequently considered to be relatively innocuous. While in general, absolute obedience to the law is a highly valued trait in German culture, theft of the kind committed by the subject cannot be classified psychologically as equivalent to stealing from individuals, since an insurance company is viewed as a rich and impersonal entity and insurance fraud is often condoned just as most people condone petty smuggling. The shooting incident, however, would seem to have no motivation other than the suggestion of the hypnotist. Although we might conjecture that the subject perhaps wished to gratify masochistic needs or avoid a reality situation by this action, none of these hypotheses sound fully convincing. It is most unfortunate that this particular aspect of the case could not have been more thoroughly verified. The most serious shortcoming of this report, as well as

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of the preceding two cases, is the fact that the material is based entirely on psychiatric studies of the victim. Much of the proof which has convinced physicians studying the cases is material which the subject has reported in deep hypnosis. Contrary to frequent assumption, recollections in deep hypnosis are by no means necessarily veridical. Rather, subjects often unwittingly confabulate and at times are capable of deliberate lies.

The Kroner case, accepted as reported, seems to provide strong supportive evidence that, in some instances at least, social control can be sufficiently increased in hypnosis to cause the subject to commit self-destructive

behavior which he could not have been persuaded to undertake without the use of hypnosis. Certain aspects of the Reiter case as well as the attempts of the girl in the Mayer case to kill her husband would suggest a similar conclusion. Unfortunately, because of the problems in establishing the true nature of the events, no definitive position can be taken.

These three cases are the only fairly well-documented ones in the literature. <sup>8</sup> Since hypnotic techniques can be fairly easily acquired, it is remarkable that no instance of hypnotically-induced criminal behavior has come to our attention which did not involve intense interpersonal relationships of long duration preceding the actual criminal behavior. Thus, it is not possible to distinguish whether the behavior is induced by hypnosis per se or whether it is more directly a function of a long, intense interpersonal relationship. Certainly the common fantasy, centered around the idea that an unscrupulous hypnotist somehow tricks an unwitting subject into hypnosis and then induces him to undertake behavior to the former's material advantage in the absence of any personal relationship which could justify such behavior, has not been verified in the annals of the law. This alone

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<sup>8</sup> A notorious case known as the Sala affair (Reiter, 1958) occurred in Sweden in 1936. The reports are extremely confusing and because of the unavailability of adequate data this case is not reviewed here.

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seems highly significant, enough so to question seriously whether the fantasy has roots in fact. Whether a more moderate view can be supported is a matter of interpretation. It might well be held that hypnosis alone might not be sufficient to induce such behavior, but that it would tend to facilitate the performance of suggested actions in a situation in which a motivational basis quite sufficient without hypnosis already exists. Though it is impossible to evaluate this hypothesis on the basis of the few and rather meagerly presented cases in the literature, certainly the hypothesis cannot be rejected without considerably more data.

### Experimental Approaches

A review both of the experimental and clinical literature fails to resolve the fundamental question of whether an individual can be compelled to commit antisocial or self-destructive behavior in hypnosis.

A principal difficulty in interpreting the literature has been the failure to distinguish between three basically different types of behavior:

1. Behavior which would appear to be repugnant to a subject in a nonexperimental context but which can easily be legitimized in the social contexts in which hypnosis occurs.
2. Behavior that the individual would not undertake in the waking state but which he has strong conscious or unconscious wishes to perform.
3. Behavior which the subject has no particular wish to engage in at any level and which he would refuse to undertake within the relationship preceding hypnosis.

Behavior (1) has been discussed in detail earlier. Numerous studies demonstrate that in an experimental setting individuals will carry out behavior which would seem at face value to be antisocial. We would predict, however, that the protective environment of the experimental situation alone, with-

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out hypnosis, would be sufficient to elicit compliance to the type of requests made in these studies. Unless it could be clearly demonstrated that subjects in an experimental situation without hypnosis would refuse to carry

out the apparently antisocial or self-destructive actions, generalization cannot be made about individuals' reactions in nonexperimental settings. Empirical research is needed to clarify this issue.

Behavior (2) represents a situation where hypnosis would be required to induce only a small shift in the motivational structure of the individual in order to cause him to carry out behavior which would normally be unacceptable to him. Given an alliance between the pre-existent (almost sufficient) motivations of the subject and the hypnotist's suggestion, it is plausible that in some instances at least compliance would be achieved. It must be kept in mind, however, that under these special circumstances any added positive motivation to carry out the behavior might be sufficient to resolve the ambivalence. This situation then is not one in which the subject is a passive automaton responding to suggestion; rather the suggestion given is highly congruent with pre-existing motives of the subject.

As stated earlier, it is difficult to evolve a rigorous research design which would test whether hypnosis can effect the type of shift in a subject's motivational structure that would be necessary in order for him to carry out a suggestion which violates internalized prohibitions. Any empirical test of this issue would require a reliable measuring instrument to determine each subject's pre-existing balance of motives toward the execution of each experimental task. Two strategies are possible, each introducing its own methodological problems:

- a. The balance of motives can be investigated by clinical assessment.
- b. The readiness to perform a given item of behavior in the waking state can be determined by actually testing the subject.

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The first of these two approaches (a) would make it unnecessary to request the subject to perform the relevant items of behavior repeatedly under different conditions. However, the problem lies in clinically assessing the amount of positive motivation and the strength of inhibitions toward a specific action. Even when patients are well-known to their psychiatrists, assessment of future behavior cannot be made with certainty. For example, the prediction of whether a patient will attempt suicide is exceedingly difficult and unfortunately sometimes inaccurate. The clinical assessment of the balance of motives toward a variety of specific actions based, on relatively brief contact, such as in an experiment, would be subject to even greater sources of error.

An experiment could nonetheless be designed utilizing this procedure. On the basis of clinical interviews a number of behavioral items are selected for each subject. The selection criterion is that the subject be ambivalent toward, but refuse to carry out, the specific actions. Half of the subjects would then be deeply hypnotized by the experimenter, and an attempt would be made to force them to carry out all of the behavioral items selected during the interview. The other half would not be hypnotized but urged to carry out the selected actions in the waking state.

It would then be necessary to demonstrate that subjects in deep hypnosis carry out significantly more of the predicted nonacceptable items of behavior than the nonhypnotized control group. This would allow the inference that hypnosis is one of the sufficient conditions for causing shifts in the motivational structure of the individual so that he will carry out suggested antisocial or self-destructive actions otherwise unacceptable. Unfortunately, the predictive power of the clinical interview is not sufficiently adequate and consequently the variability of the data would probably be extremely great. Thus a prohibitively large sample would be required to reject the null hypothesis. As a result, such a study carried out with what would appear to be a large sample might fail to

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detect an actual difference caused by hypnosis because of the inefficiency of behavioral predictions (Type I error).

The alternative strategy (b) is to actually test the readiness of the subject to carry out items of behavior which might be expected to be unacceptable. The principal objection to this procedure is that the meaning of the request to carry out an action is altered by repetition. For example, the first time a subject is asked to destroy a purportedly valuable vase, it may be plausible that the object in question is truly priceless. Each repetition of the request, however, communicates more clearly to the subject that the experimenter is not unduly concerned about the execution of the request. As the request is repeated under different circumstances, not only is the meaning of the action altered but also the idea is conveyed to the subject that the experimenter probably expects differential behavior under varied conditions. In this instance it is communicated that the experimenter expects the subject to carry out the request in hypnosis. As the experimenter's expectation of compliance is communicated, it helps to redefine further the task as harmless (and vice versa).

An experimental design utilizing actual testing of the subject's behavior in the waking state needs to take these problems into account, and therefore the utilization of appropriate control groups is of especial importance. Three experimental conditions employing three different experimenters are necessary.

Condition I: Experimenter I would urge the subjects to perform a series of tasks which violate internalized sanctions and which would be expected to be refused by the subjects. On the basis of the preliminary test of each subject, a list of six tasks would be selected, two which had been carried out and four which had been refused. The specific tasks empirically established for each subject may vary, and different subjects will carry out different tasks depending upon their value system. The lists, however, should be of comparable difficulty. The specific tasks which each subject would have

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accepted and refused are not disclosed to the other experimenters until after the completion of the experiment.

Condition II: The subject is hypnotized by Experimenter II who has been given the specific list of tasks selected in Condition I. Experimenter II attempts to compel the subject to carry out all of these tasks. It is essential that Experimenter II be convinced that subjects in deep hypnosis can be compelled to carry out any suggestion even if it violates internalized sanctions.

Condition III: Experimenter III attempts to persuade the subject to carry out the tasks established in Condition I without the use of any hypnotic techniques. It is essential that Experimenter III be committed to the proposition that subjects can be persuaded to carry out in the context of an experimental situation any task which they can be compelled to undertake in hypnosis. <sup>9</sup>

Condition III is necessary because the second time a task is requested the meaning of the request is altered as has already been discussed. Were it not for this essential point Conditions I and II would be adequate. Because of this problem, however, it will be necessary to randomly assign subjects to two different orders: Conditions I, II, III, or I, III, II. In this manner some statistical control may be gained over order effects. The hypothesis can then be tested whether the use of deep hypnosis is more effective in eliciting compliance than a concerted effort at persuasion without hypnosis in an experimental situation.

While it would seem that the experiment as described above is an adequate test of the efficacy of hypnosis in causing subjects to undertake unacceptable behavior toward which they are ambivalent, it is nonetheless open to serious criticism. Namely, the subjects themselves may well be aware that the over-all expectations of the experiment are that they will more readily carry out behavior in hypnosis than in

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<sup>9</sup> The results of the subject's performance in Conditions II and III are not disclosed to Experimenters III and II respectively.

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response to persuasion. This will be true even though Experimenter III makes an honest and concerted effort to elicit compliance. One could avoid this pitfall only by having Condition III precede Condition II and having the subjects unaware at the time of Condition III that Hypnotic Condition II is to follow. However, such a procedure would be subject to the problems of order effects (as well as the prohibitive cost of the post hoc selection of true somnambulists).<sup>10</sup>

One way of dealing with these problems is the use of a different type of control group which has been proposed by the author elsewhere (1959b) -- the simulating subject. This technique employs subjects who have been unable to enter hypnosis despite repeated attempts to do so. The statement oftentimes made in the literature that hypnosis cannot be successfully simulated does not hold true provided that the subject is told that the hypnotist does not know which subjects are simulating. Under these circumstances subjects are capable of behaving in a manner not readily distinguishable from deep hypnosis without having any of the subjective experiences characteristic of hypnosis.<sup>11</sup> Simulating subjects make possible a control group which is treated identically to the experimental group because the experimenter does not know to which group the subject belongs. The purpose of such a control group in this experiment is to determine

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<sup>10</sup> Clearly, the sequence of Conditions I, II, and III is essential for statistical control of order effects. As was pointed out above, this sequence tells the subject that a hypnotic condition is involved before the nonhypnotic condition of persuasion. It would seem that a solution to this problem is the induction of posthypnotic amnesia. However, it has been generally observed that despite a subject's inability consciously to recall events which occurred in hypnosis, these events nonetheless form the basis for his subsequent behavior.

<sup>11</sup> In using this procedure it is essential that adequate interviews are conducted with the simulating subjects after the experiment in order to identify the rare instance when simulating subjects actually enter hypnosis. This distinction can readily be made on the basis of the subjective reports of the experience.

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whether the idea is communicated that the hypnotic condition ought to cause increased compliance over and above the nonhypnotic condition of persuasion.

If it could be demonstrated that among the real hypnotic subjects deep hypnosis elicits a higher degree of compliance than Condition III of persuasion and that this does not hold for simulating subjects, we would have convincing evidence of the effectiveness of hypnosis to alter the motivational structure of the individual. If on the other hand we were to find that with both the deeply hypnotized and the simulating subjects the hypnotic condition is more effective than persuasion we would be faced with two possible conclusions: either that both hypnosis and simulated hypnosis provide sufficient legitimation for the subject to carry out behavior otherwise unacceptable or that the subjects perceived this to be a pseudosituation, recognized that they were expected to perform more tasks in the hypnotic condition, and were responding to the implicit demands of the experimental situation. Therefore, no conclusions could be drawn about the effectiveness of hypnosis as such in altering the motivational structure in other situations. Unfortunately this experiment would be almost impossible to carry out because the problem of selecting tasks in Condition I, which can be requested of subjects and which they might reasonably be expected to refuse, is extremely difficult with the self-imposed ethical restrictions of experimental research with human subjects.

Behavior (3) represents the question which is most relevant to our discussion: whether hypnosis in itself is sufficient to provide the necessary motivation for a subject to carry out behavior unacceptable and not personally



desirable. This approaches more closely the issue of the degree of social control inherent in hypnosis.

In this instance it will be essential to take an item of behavior which we have reason to believe is unacceptable to

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all subjects. Such an item of behavior would make it unnecessary for the subject to act as his own control since a control group of subjects could be shown to uniformly refuse to carry out the behavior.

This would obviate the need for repeating the same request and permit study of this phenomenon in a context which is perceived to be nonexperimental by the subject. This in turn would allow generalization to other nonexperimental contexts.

In order to satisfy the requirements for an empirical test of this question, an item of behavior needs to be selected which would allow the hypnotist to derive personal gain from the subject's action. The presence of a clear and obvious ulterior motive is absolutely essential for the task to be perceived as real and nonexperimental. In and of itself a profit motive for the hypnotist is irrelevant; however, the absence of such a motive defines the situation as experimental. It is therefore necessary to find a behavioral item which is safe to require of a subject, yet appears unacceptable and would profit the hypnotist. Furthermore the social context in which the experiment is performed would need to be nonexperimental but of a nature to permit the use of control subjects in a plausible manner.

An example of an experiment which might meet these specifications is as follows. A graduate student is employed as an experimenter and subjects are run by him in an experiment requiring several sessions. The experiment, for point of illustration a study of hypnotic perception, includes the training of subjects to enter hypnosis by prearranged signal. After the second experimental session the experimenter under some pretext asks the subject to see him at his home in the evening. At that time the experimenter -- now away from the laboratory and alone with the subject -- induces hypnosis utilizing the prearranged signal. In deep hypnosis the subject is requested to steal a copy of an examination which the graduate student experimenter would be required to pass for

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his Ph.D. from the office of the chairman of the department. 12 The subject would be given suggestions to the effect that he steal the copy of the examination, bring it to the graduate student experimenter, and have total and complete amnesia for his behavior.

In the experiment described above simulating subjects would be utilized as well as real hypnotic subjects. The graduate student's behavior could be made plausible to the simulating subjects by telling them that the graduate student would not be aware that there would be any simulators involved in the study. The experimental question would be whether subjects in deep hypnosis would carry out this type of post-hypnotic behavior and whether the simulating subjects would either refuse directly or report the graduate student experimenter to the senior investigator who had initially asked them to simulate.

If we found an approximately equal proportion of both groups of subjects carrying out the suggestion, no conclusions could be drawn. However, if essentially all of the simulating subjects refuse or report the suggestion to the senior investigator, we would have strong presumptive evidence that subjects perceive the suggestion as being outside of an experimental context, and therefore if some of the hypnotized subjects carry out the suggestion and actually steal the copy of the examination, we would have strong evidence for the proposition that hypnosis can provide sufficient motivation to cause subjects to carry out antisocial behavior otherwise unacceptable.

This situation has the further advantage of making it relatively possible to keep subjects under close surveillance throughout the experiment. Such surveillance would seem a necessary safeguard to prevent any untoward sequelae from developing. It would of course also be necessary to have

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12 The crucial point here is that we are dealing with a suggestion which in the college environment is both dangerous and highly antisocial and which would plausibly profit the hypnotist.

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adequate psychiatric follow-ups in order to prevent the experience from causing any future difficulties.

### Conclusions

Primarily because of the self-imposed ethical restrictions by which experimenters are bound, the prospect of a rigorous test of the classic question is dim. Although suitable clinical material may perhaps become available from the criminal courts, it is extremely difficult to draw definitive conclusions from such material.

A summary of the literature and review of the total available evidence have led the author to conclude that the situation envisaged by fiction writers and the lay public is not supported by evidence, that is, extant material does not indicate that an unsuspecting individual can be be tricked into hypnosis and compelled to undertake behavior to the advantage of the hypnotist in the absence of a long term meaningful personal relationship.

A review of the experimental literature shows that subjects will perform behavior in hypnosis which appears either selfdestructive or antisocial. However, we expect that nonhypnotized subjects would be equally willing to perform such tasks. Truly controlled evidence on this point is lacking.

Some of the reported clinical cases lend themselves to the interpretation that hypnosis may have facilitated the subject's performance of actions which satisfied needs, but there is no evidence indicating that the subjects were unwilling to carry out these actions without hypnosis.

The situation which is probably most relevant to the central issue of this paper is that in which a subject is ambivalent toward an item of behavior. In such a situation, he might well refuse to carry out the behavior in his normal waking state, but he could be induced to carry it out under certain special circumstances. One condition sufficient to resolve the ambivalence might be hypnosis. The experimental

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test of this question is extremely difficult. Quite possibly, in some instances hypnosis, like alcohol, might provide the necessary rationalization for the execution of normally unacceptable actions.

In our initial endeavor to study this issue we had hoped to learn something about the essential nature of the hypnotic state. If a review of the literature had provided conclusive evidence that antisocial or self-destructive behavior could be elicited, we could assume that an increase of control is present in hypnosis. Unfortunately we find ourselves unable to draw well-founded conclusions about the central issues, which could shed light on the nature of hypnosis. What has emerged from our studies is a clearer recognition that the social context of the situation preceding the induction of hypnosis needs careful investigation, and that equally deep hypnotic states may, in different social contexts, lead to different degrees of social control. Thus we do not know at present whether deep hypnosis in the absence of an intense pre-existing positive relationship leads to as great a degree of control as an equally deep hypnotic trance induced, for example, in a patient under positive transference.

In summary, it has become evident that the problem of whether an individual will commit antisocial or self-destructive actions in hypnosis can be separated into two parts:

1. Is there an increase in social control in hypnosis?
2. If such an increase in social control exists, do its parameters include the violation of internalized sanctions?

Both of these questions have significant implications for an understanding of the nature of the hypnotic state. However, the issue of social control takes logical precedence over, and appears to be more basic to, an understanding of the process of hypnosis. By formulating the problem in terms of social control, a rigorous experimental approach becomes feasible without the ethical and moral difficulties involved in the study of antisocial or self-destructive behavior. It has been

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emphasized in this paper that research on this question must be designed in a manner that takes into account the remarkably high degree of social control already implicit in any experimental context. An interdisciplinary approach will be required. The concept of social control may provide a link between the psychologist's study of motivation and the sociologist's investigation of role relationships.

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